THE UNIVERSITY OF ALBERTA

ALBERTA HOG MARKET, CONDUCT AND PERFORMANCE

by

©

W. JAMES LOCKHART

A THESIS
SUBMITTED TO THE FACULTY OF GRADUATE STUDIES
IN PARTIAL FULFILLMENT OF THE REQUIREMENT
FOR THE DEGREE OF MASTER OF SCIENCE

DEPARTMENT OF AGRICULTURAL ECONOMICS
EDMONTON, ALBERTA
JUNE 15, 1967

UNIVERSITY OF ALBERTA

FACULTY OF GRADUATE STUDIES

The undersigned certify they have read and recommend to the Faculty of Graduate Studies for acceptance a thesis entitled "Alberta Hog Market, Conduct and Performance," submitted by W. James Lockhart, in partial fulfillment of the requirements for the degree of Master of Science.

ABSTRACT

Considerable concern has been expressed by Alberta hog producers about the performance of the present system of marketing hogs. Factors that have received the most attention include establishment of the sale price for hogs, competitive practices in hog procurement, and discrimination in marketing charges to different producers. The system of marketing hogs in Alberta during 1965 was studied with emphasis on the procurement practices and on the negotiation of the terms of trade. Data for the study were obtained by interviewing officials of the various meat packing plants using two semi-directive questionnaires. Officials of public stockyards, terminal markets, and the government were also interviewed regarding marketing activities. The overall goal of the marketing system was taken to be the achievement of optimum marketing efficiency and economic equity for producers, consistent with the general economic goals of society. Three main functions of the marketing system were found to be performing inadequately: (1) the establishment of the sale price, (2) the assembly and movement of hogs to the meat packing plants, and (3) the collection of sufficient accurate data on market conditions and dissemination of the information in a meaningful and usable form to the industry. The structure of the marketing system for hogs should be altered to bring about improvement in the performance of these functions.

ACKNOWLEDGEMENTS

A number of individuals and organizations have contributed substantially to the completion of this thesis. First, the writer wishes to express sincere thanks to his supervisor, Dr. T. W. Manning, for his guidance throughout the study. The writer is also indebted to the Economics Branch, Canada Department of Agriculture, for granting him a leave of absence and to the Meat Industry Coordinating Committee for research funds. The cooperation of various officials associated with the industry; officials of the meat packing plants, Mr. H Winkelaar of the Alberta Livestock Co-operative, Mr. B. R. Triscott of Western Stockyards Limited, and officials of the Production and Marketing Branch, Canada Department of Agriculture, Edmonton, is sincerely appreciated. Finally the author wishes to acknowledge the understanding and moral support of his wife, Sandra, who contributed so much to the completion of the thesis.

TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

Chapter I

INTRODUCTION

The performance of the hog marketing system in Alberta has become a matter of increasing concern in recent years. Serious questions are being raised regarding various aspects of the present system of marketing hogs.[1] The factors causing the greatest concern about the performance of the marketing system include the uncertainty among producers concerning how prices are established, the competitive practices in hog procurement, discrimination in marketing charges resulting in different prices being paid for similar quality hogs purchased from different producers, and the increasing concentration of market power in food retailing. Additional knowledge about the actual performance of the present marketing system is required in order to evaluate both its weaknesses and its strong points. Once this information is known, the industry will be in a better position to formulate policies for improvement.

Objective

The principle objective of the study was to evaluate how well the present hog marketing system was aiding those individuals and groups trading within the system and society in general in attaining their desired goals. Certain important goals of producers were selected for evaluation purposes. These goals, while being important to producers, were also considered as being consistent with the general goals of society.

---

1 The term "hogs" refers to all pigs sold for slaughter.

Procedure and Sources of Data

The approach used to obtain information for the study involved a series of personal interviews with officials of the major meat packing plants slaughtering hogs, terminal market officials, and government personnel. For interviewing officials of the major meat packing plants two semi-directive questionnaires were employed to gather information on the hog procurement and negotiation practices of the meat packing plants (Appendix). In addition, officials of the Calgary and Edmonton public stockyard companies, terminal market agencies, and government personnel were also questioned on hog procurement practices and trade negotiation activities in the marketing of hogs in Alberta. Additional information was obtained from published reports of the Canada Department of Agriculture, Alberta Department of Agriculture, and the Dominion Bureau of Statistics.

Chapter II

CONCEPTUAL FRAMEWORK

Marketing problems of an economic nature arise from some disequilibrium and maladjustment in the classical sense of the market or because of some basic economic forces of change. Economic marketing research is usually directed toward remedies with the objective of improving market performance in terms of operational efficiency, pricing efficiency, or both. Market performance is defined as the attributes of production and exchange in a segment of the economy that directly influence the welfare of the participants and the society. The attributes include the results that directly influence people's well-being. [1] Recommendations to improve market performance may take the form of suggestions directly to the industry and/or to government policy makers.

Real or imagined problems are the source of most changes in government policies and programs as well as most research. Both research recommendations and public policy programs represent someone's idea of what "ought to be". Final decisions regarding remedies or solutions to the problems must ultimately rest with the general public, policy markers, and the industry concerned. The job of the economist is to (1) determine the nature and the type of imperfections existing, (2) to evaluate trends and proposed solutions or alternatives in the light of economic criteria, and (3) develop and evaluate the likely performance of suggested alternative

---

1 S. H. Sosnick, "Operational criteria for evaluating market performance," Market Structure Research, P. L. Farris, Editor (Ames, Iowa: Iowa State University Press, 1964), 85.

marketing systems for the particular problem. [1] The objective of marketing research is therefore to define the problem or problems clearly, to describe and evaluate the existing situation and to develop and evaluate alternatives. The aim of all concerned should be to improve the over all performance of the market.

Marketing

Economic activity is composed of production and consumption. Economists define production as the creation of usefulness or utility. Marketing is generally considered a part of production because both the initial creation and the marketing of the product involves the production of time, place, form, and possession utilities. Marketing consists of the activities necessary to ascertain the needs and wants of consumers and relating the information to producers, in facilitating transfers of ownership of the products, providing for the physical distribution, and for establishing the terms of exchange for the goods and services.

A market maybe defined in a number of ways. Williams and Stout define a market as a sphere within which price forces operate and exchanges of title tend to be accompanied by the actual movement or exchange of the goods and services. [2] The services performed by the marketing system thus determine the scope of the market. No geographical limitations are imposed except that the market is to involve only the sphere in which its price making forces operate.

---

1 W.F. Williams and T. T. Stout, Economics of the Livestock-Meat Industry (New York: MacMillan Co., 1964), 148-149.

2 Williams, op.cit., 110-111.

Economic efficiency is expressed as the production and distribution of goods and services in accordance with the wishes and desires of the community under conditions of maximum technological efficiency.[1] Technological efficiency means the attainment of the greatest possible output from given resources or the achievement of a given output with the least input of resources.[2] Economic efficiency is concerned with the allocation of scarce resources in the production and distribution of goods and services according to the quality and quantity preferences of the individuals in the community. These preferences can be rated theoretically by the concept of economic welfare. Little has postulated that economic welfare is an increasing function of the well-being of individuals.[3] The economic well-being of individuals is usually considered to be an ordinal concept.

It is assumed that the individual, given a change in one of the parameters, is able to determine whether his well-being is better, worse, or the same as before. When the individual is better off, he is said to be on a higher behavior or preference line. It is also postulated that economic welfare is greater if one individual becomes better off and no individual is made worse off by the change in the parameter. These postulates are necessary in order to state how goods and services ought to be allocated to attain the condition of optimum exchange. Optimum exchange is a

---

[1] Tibor Scitovsky, Welfare and Competition (London: George Allen and Unwin Ltd., 1952) 159-180.

[2] Ibid., 148-150.

[3] I.M.D. Little, A Critique of Welfare Economics (London: Oxford University Press, 1950), 117-125.

necessary condition in attaining the highest possible value of the economic welfare function.

Marketing Efficiency

Marketing efficiency is concerned with the distribution aspect of economic efficiency. In the marketing of livestock both pricing and the physical movement of the product between buyer and seller are of concern. Marketing efficiency is thus concerned with physical or operational efficiency and pricing efficiency.

Operational Efficiency

Operational efficiency is concerned with the business activities necessary so that buyers can obtain the goods and services in the volume, form, place, and at the time desired consistant with the limitations of the production process. In the marketing of hogs the majority of these marketing services center around the assembly, transportation, grading, ownership identification, and in the making of payments to the producers for the hogs involved. An operational efficient marketing system is one in which the value of useful marketing services is large relative to the input requirements of labor and capital resources utilized in marketing. There are several measures of operational efficiency, none of which are very precise. Two commonly used measures are the value added procedure and the marketing margin. The value added procedure as defined by the Census of Manufactures is the market value of all shipments or sales minus the cost of materials, supplies, containers, fuel, and contract work. The marketing margin approach is even less precise than the value added method but is easier to calculate. The marketing margin is defined as the

difference in the farm price and the comparable retail sale price.[1] No account is made of the additional services incorporated with the retail product. The size of the marketing margin is an unsatisfactory way of estimating operational efficiency because the number and cost of the various services vary both over time and between regions. As more services are incorporated into the final product, the price spread between the farm price and the retail price can be expected to increase.

Pricing Efficiency

Pricing involves an intricate system of communication in which buyers and sellers are made aware of the preferences and limitations of each. Although less tangible and more abstract, it is the pricing role for which the marketing system is exclusively responsible.

Economic price theory is based on the assumption that each individual endeavors to satisfy his tastes and wants as far as possible in view of the obstacles which confront him. For a community these obstacles are primarily technical in that production is limited by available human and natural resources, by the level of technology and knowledge available to process and utilize the resources. For individuals and groups within a community the limitations of a fuller satisfaction of wants are, in addition, a function of the wants and tastes of others.

The Committee on Price Determination summarized the role of prices as an elaborate indicator of the alternatives open to individual consumers

---

[1] Williams, op.cit., 120-122.

and producers.[1] The structure of prices indicates to the buyer the terms on which he can acquire the goods and services. To the seller the price structure indicates the terms on which he may dispose of the goods and services he has for sale. Price variations affect the alternatives open to both buyers and sellers. These alternatives are affected by both real and relative price changes for the goods and services being sold and by the real income of the individuals in the community.

Pricing efficiency involves the degree of accuracy, speed of gathering, compiling, and disseminating revelant market information to both buyers and sellers. The efficiency of the pricing system also depends on the extent that the information is utilized by both buyers and sellers in decision making.

Price discovery is seldom, if ever, the simple automatic process usually implied by elementary economic theory. The level and slope of demand and supply functions are seldom known precisely thus discovery of efficient prices is a trial and error process. The trial and error procedure is a continuous process because demand and supply functions shift continuously. Even upon the chance discovery by the market of an efficient price, the industry will likely be unaware of its discovery because of incomplete knowledge of the market.

In order that improvements maybe made in the pricing efficiency of any market, some standard of measurement is required. The concept of perfect competition is often used as a useful directional aid in evaluating

---

[1] Committee on Price Determination, Cost Behavior and Price Policy (New York: N.B.E.R. 1943), 33-34.

actual market situations and in charting courses toward improvement. Used as a directional aid, the concept of perfect competition provides certain guides or rules of thumb.

1. More competition, generally speaking but not always, is considered better than less competion. Markets characterized by monopoly, a few large firms, or lack of competitive bidding, it says, are not likely to be as efficient or satisfactory from the standpoint of prices, pricing, or equity as more competitive markets. On the other hand, price wars and "cutthroat" competition usually are considered destructive and contrary to the public interest.
2. Restrictions on entry or exit and barriers to trade usually are considered impediments to efficiency and progress. At times, however, exceptions appear justified. For instance, protection of infant industries and controls on the spread of plant or animal disease sometimes seem to justify trade barriers.
3. Another general rule provided by the perfect-market concept is that markets are likely to function better when buyers and sellers (1) have more information rather than less and (2) are about equally informed than if they are unequally informed.
4. The concept suggests that markets likely will be more efficient in terms of both physical operations and pricing and will operate more equitably if grade, class, or quality differences in products are carefully described in terms of grades, standards, specifications, or brands and if these are widely and uniformly understood.
5. The perfect-market concept implies freedom from "excessive" government interference and, indeed, makes sense only in a private-enterprise economy. At the same time, there seems to be some general agreement that competition is more active and effective, social welfare is enhanced, and market performance is improved when some of the rules of the contest among business firms are specified and enforced.[1]

Many economists including Williams and Stout who use the concept of perfect competition as a guide to what an improved marketing system should be are well aware of its deficiencies in the real world. Other economists have approached the problem by deriving norms of workable competion. Sosnick has outlined this approach in the theory of workable competition and described

---

1 Williams, op.cit., 146.

it as being an attempt to indicate what practically attainable states of affairs are socially desirable in individual capitalistic markets.[1] One of the two aspects of the theory that has received the most attention is that perfect competition is not always a reliable basis for appraising actual markets. The other aspect is that it becomes necessary to formulate explicitly a criteria of workable competition; a criteria whose greater fulfilment would imply a socially better situation, and whose complete fulfilment is a necessary and sufficient condition for the achievement of what the public interest demands.[2] Sosnick has attempted to derive certain norms by which the performance of a marketing system can be judged. The difficulty in using these norms is that they are not specific enough for a particular problem. Like the rules of thumb obtained from the perfect competition model, they are somewhat general in nature.

To evaluate the performance of the Alberta hog market a set of goals were selected (p. 47). These goals were selected primarily from the viewpoint of hog producers though at the same time it was attempted to keep the goals consistant with the best interests of society. Both the model of perfect competition and the model of workable competition were used to derive these goals.

---

1 S. H. Sosnick, "A Critique of Concepts of Workable Competition," Quarterly Journal of Economics (Aug. 1958), 380.

2 Ibid., 390-391.

Chapter III

HOG AND PORK INDUSTRY

Canada

Ontario, Alberta, and Quebec produce the largest proportion of Canadian hogs. Ontario, which produces almost 40 percent of Canadian hogs, is both the largest producer and consumer of pork (Figure 1). Alberta ranks second as a producer, while Quebec is third. Quebec is now trying to increase its production of pork. Ontario and Quebec are the major pork consuming areas based on provincial population (Figure 2). At the present time Quebec is the largest pork deficit region in Canada. Canada is usually self-sufficient in pork. Net exports of pork have been in the order of 40 million pounds per year, the major exception being 1963 when Canada had a net import of about 40 million pounds (Figure 3). The majority of Canada's pork trade is with the United States, although some pork has been imported from Europe in recent years.

Seasonal Variation in Production

Seasonal variation is an important factor in Canadian hog production. Hog marketings are usually largest during the spring months, with short supplies occurring during August and September. Marketings increase again during the early winter months with reduced deliveries during the Christmas--New Year holiday season. Some variation in marketings occurs from week to week because of weather conditions and statutory holidays. There is a relatively small degree of variation in pork consumption. Stocks of pork are built up during periods of flush marketings to facilitate meeting consumer demand for pork and pork products during periods when hog marketings are small.

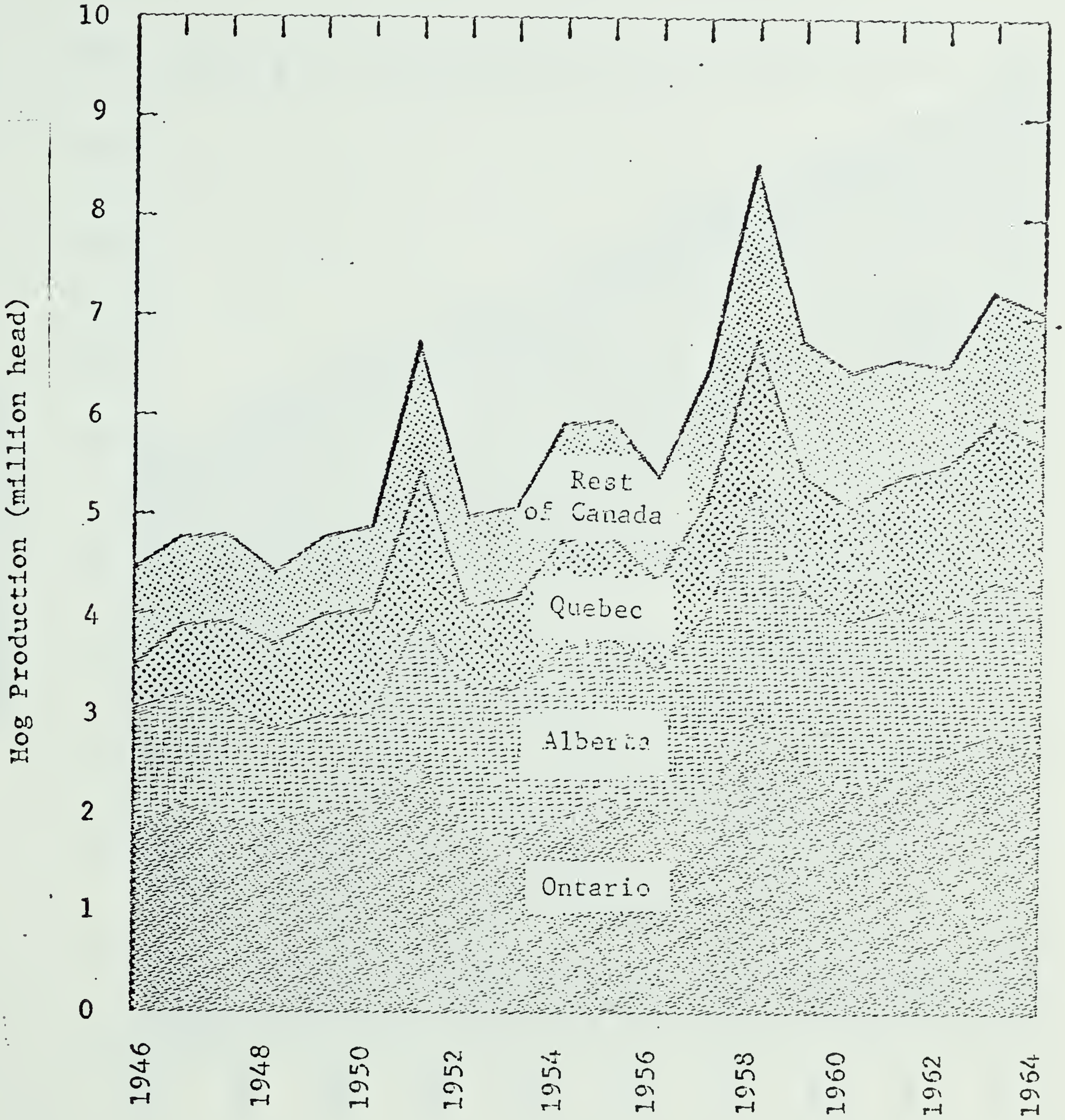

Figure 1

ANNUAL HOG PRODUCTION, CANADA AND SELECTED PROVINCES, 1946-1965

Source: Canada, Dept. of Agriculture, Production and Marketing Branch, "Annual Livestock Market Review," (Ottawa).

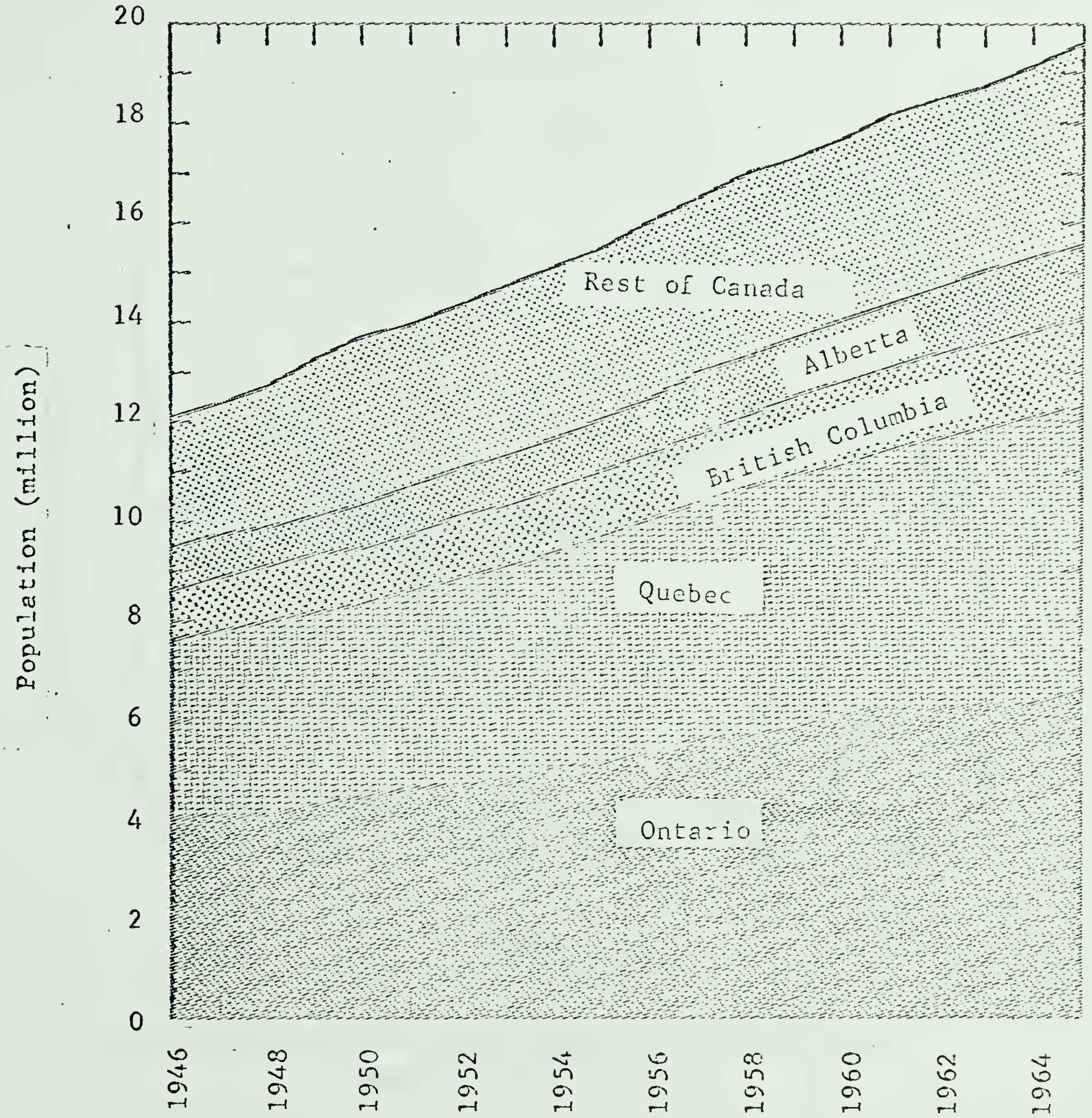

Figure 2

POPULATION OF CANADA AND SELECTED PROVINCES, 1946-1965

Source: Census of Canada, 91-203.

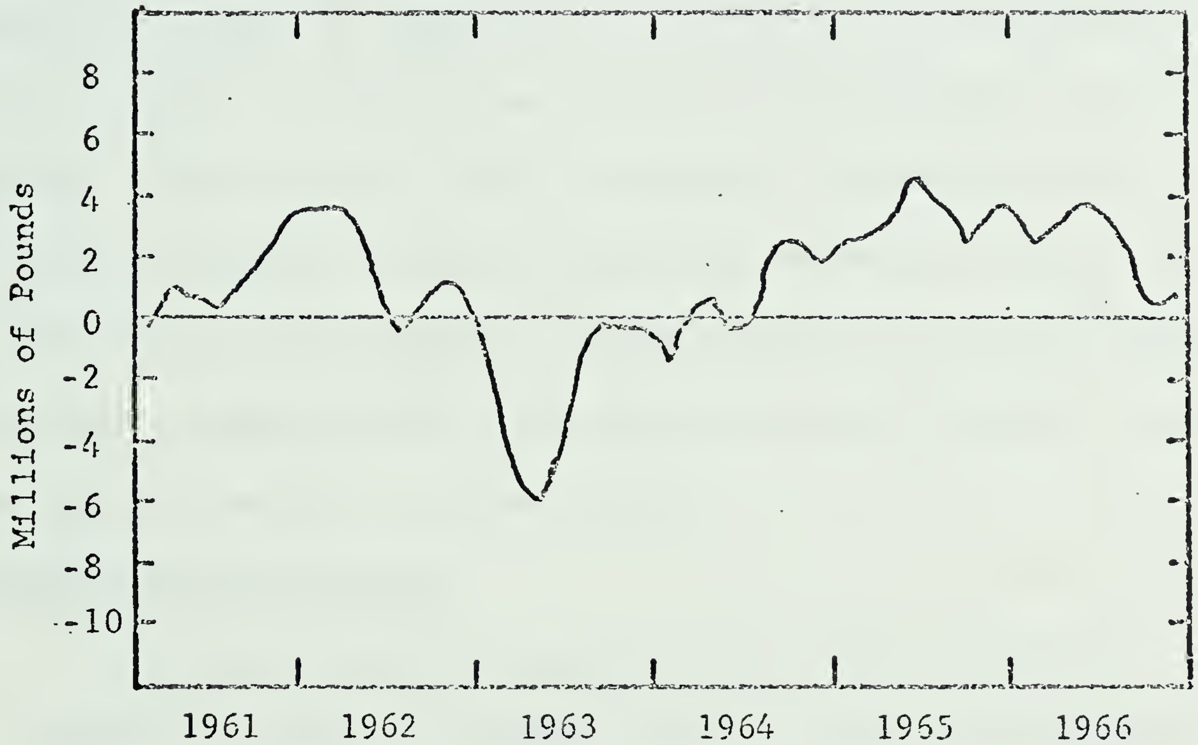

Figure 3

NET EXPORTS OF PORK FROM CANADA, 1961-1966, (Three month moving average)

Source: Calculated from Canada, Dept. of Agriculture, "Livestock and Meat Trade Report, Weekly," green pages.

Pork is stored primarily by freezing and canning. Six months is the usual limit for storing frozen pork, although on occasion it has been stored for longer periods. Canned pork keeps indefinitely.

Consumption

Per capita consumption of pork has exhibited some wide fluctuations since the early 1940's (Figure 4). The number of pounds of pork consumed per capita has ranged from less than 45 pounds during the period previous to 1941 to greater than 60 pounds per capita for the years 1943 and 1944. Since the late 1950's the annual consumption of pork in Canada has remained relatively steady at about 50 pounds per capita. The principle market for pork in Canada is in the densely populated communities along the St. Lawrence River including Toronto and Montreal. Vancouver is an important market for Alberta pork.

Composition of the Industry

The meat industry is composed of a number of sectors. The main sectors are producers, market agencies, stockyard companies, packers, processors, wholesalers, retailers, and consumers. Because of the nature of the study attention was focussed on the activities of producers, market agencies, stockyard companies, packers, and processors. While the degree of market power held by the retail food chains was not examined in detail here, a number of them have become quite influential in their dealings with meat packing firms.[1] One should keep in mind the influence of the

[1] Arthur Lerner and T. S. Patil, "Changes in the Market Structure of Grocery Retailing," Canadian Journal of Agricultural Economics, XIII (1965), 20-35.

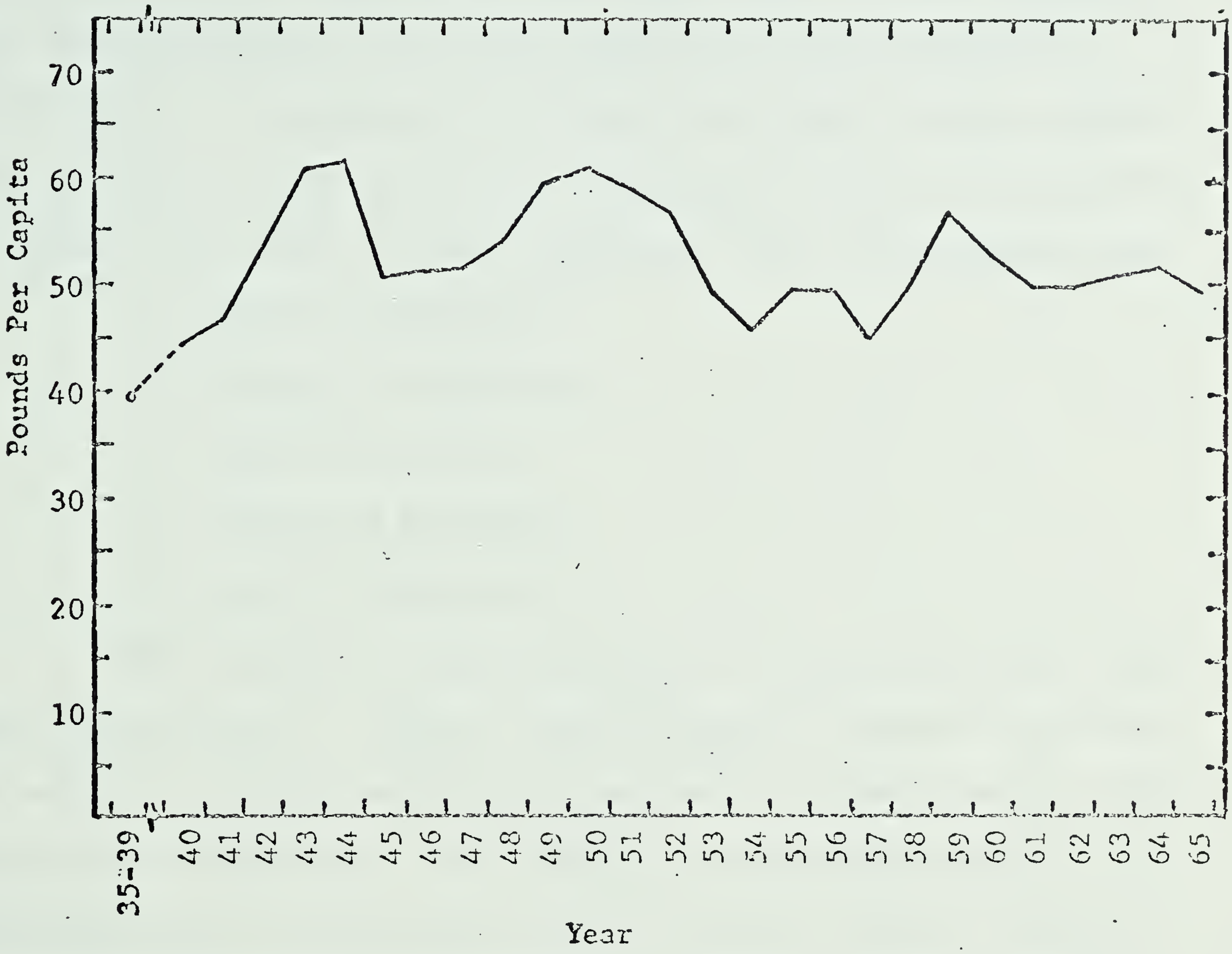

Figure 4

PER CAPITA DISAPPEARANCE OF PORK (CIVILIAN), CANADA, 1935-1965

Source: Canada, D.B.S., "Livestock and Animal Products Statistics, Annual," (Ottawa: Queen's Printer) 23-203.

retail food chains when the behavior of the meat packers in hog procurement is discussed.

The slaughtering and meat packing industry in Canada is composed of a few very large firms plus a large number of small companies. They vary considerably in the scale and nature of their operations. Canada Packers, in submission to the Restrictive Trade Practices Commission, grouped all firms in the meat packing industry into five categories according to the nature of their operations.[1] The five categories were:

1. Inspected Slaughterers
2. Uninspected Slaughterers
3. Inspected Processors
4. Uninspected Processors
5. Fresh Meat Wholesalers

The "inspected slaughterer" group is the most important in the meat packing industry. They are termed "inspected" because their plants are subject to regular inspection by the Health of Animals Branch, Canada Department of Agriculture. The Production and Marketing Division of the Canada Department of Agriculture also has Livestock Officers stationed at these meat packing plants to grade the livestock, particularly hogs, on a rail basis. It is on the basis of the rail grade that the Federal Government's hog premium for Grade A hogs is made. Moreover, the meat packing plants purchased the majority of the hogs on the basis of the rail grade and weight.

---

[1] Canada Department of Justice, Restrictive Trade Practices Commission, "Report Concerning the Meat Packing Industry and the Acquisition of Wilsil Limited and Calgary Packers Limited by Canada Packers" (Ottawa: Queen's Printer, 1962), 95-96.

Since 1955 greater than 85 percent of the total commercial slaughter of hogs has been done by inspected slaughtering plants (Figure 5). Uninspected slaughterers include all slaughtering firms not subject to plant inspection by personnel of the Health of Animals Branch, Canada Department of Agriculture. It does not include farmers who slaughter their own livestock for sale. The exact number of uninspected slaughterers is difficult to determine, but Canada Packers in their submission to the Royal Commission on Restrictive Trade Practices estimated that there were in Canada at least 2,047 such establishments in 1959.[1] The proportion of the meat sold by these firms was estimated to be 15.6 percent, with over 80 percent of the livestock being slaughtered by the inspected slaughtering firms.[2] Firms doing uninspected slaughtering are considerably more numerous in Ontario and Quebec than in Alberta. The three remaining groups of firms are of minor importance to the industry, especially in Alberta.

Alberta

Production

Alberta's annual production of hogs has varied from 20 to 29 percent of the Canadian total, an average of slightly less than 25 percent. Hog sales accounted for $77,000,000 or 11.9 percent of total cash income received by Alberta producers from the sale of farm products during 1965.[3] The majority of hogs raised in Alberta are produced in the

---

1 Ibid.

2 Ibid., 115.

3 R. E. English, "Statistics of Agriculture for Alberta, 1964 and 1965," (Edmonton, Alberta: Alberta Dept. of Agriculture, Economics Division, Nov. 1966) Pub., 853-2, 27.

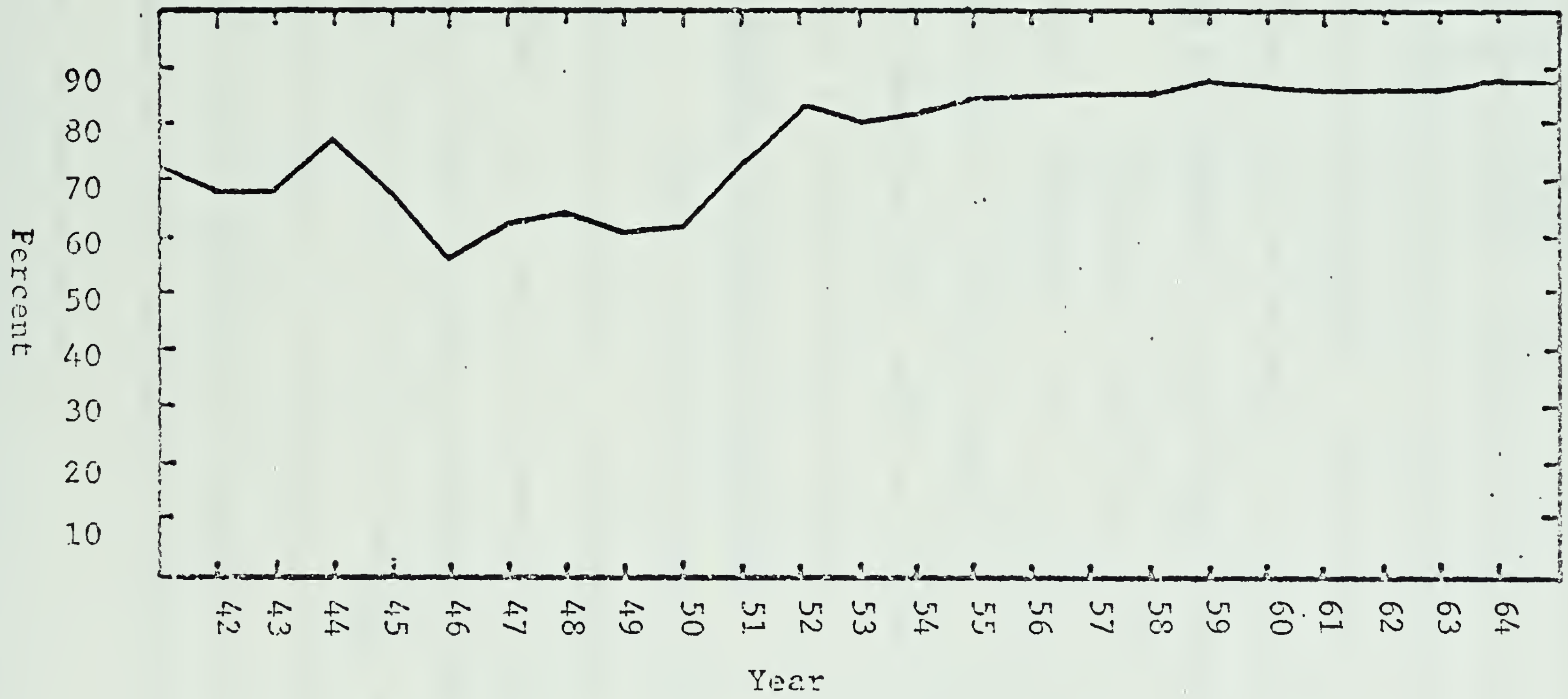

Figure 5

ESTIMATED PERCENTAGE OF THE NUMBER OF SLAUGHTER HOGS MARKETED THAT WERE HANDLED BY INSPECTED MEAT PACKING PLANTS, CANADA, 1941-1965

Source: Calculated from Canada, D.B.S., "Livestock and Animal Products Statistics, Annual," (Ottawa: Queen's Printer), 23-203; Canada, Dept. of Agriculture, Production and Marketing Branch, "Annual Livestock Market Review," (Ottawa).

region extending from east of Lethbridge north through Calgary to Edmonton and east to the Saskatchewan border (Figure 6). Production is most concentrated in the black soil zone extending from south of Red Deer, north to Edmonton and east. Mixed farming is carried out extensively in this area, which lends itself to the production of livestock and coarse grains. Hog production is quite dependent upon the production of coarse grain for feed and thus is the main reason why hogs are produced in such numbers through the black soils in this region.

In general, agriculture and therefore hog production is becoming more specialized. This is illustrated by the fact that during the period 1951 to 1961 the proportion of farms reporting hog inventories up to 17 head decreased, while an increased share of the farms had inventories of 33 head or more (Figure 7).

Disposition of Alberta's Production

Alberta regularly produces a large quantity of surplus pork. Provincial requirements absorb roughly one third of Alberta's total production of pork and pork products, ranging from 40 million pounds in 1946 to around 75 million pounds in 1964.[1] British Columbia, a major deficit area for pork imports the major share of its requirements from Alberta (Figure 8). The remainder of Alberta's production of pork, which varies considerably from year to year, is exported to eastern Canada and to the northwestern United States.

---

[1] Provincial consumption of pork and pork products was calculated by multiplying per capita disappearance data for Canada by the provincial populations. Where differences in average personal disposable incomes, tastes, etc. would result in actual consumption being different, these factors were ignored.

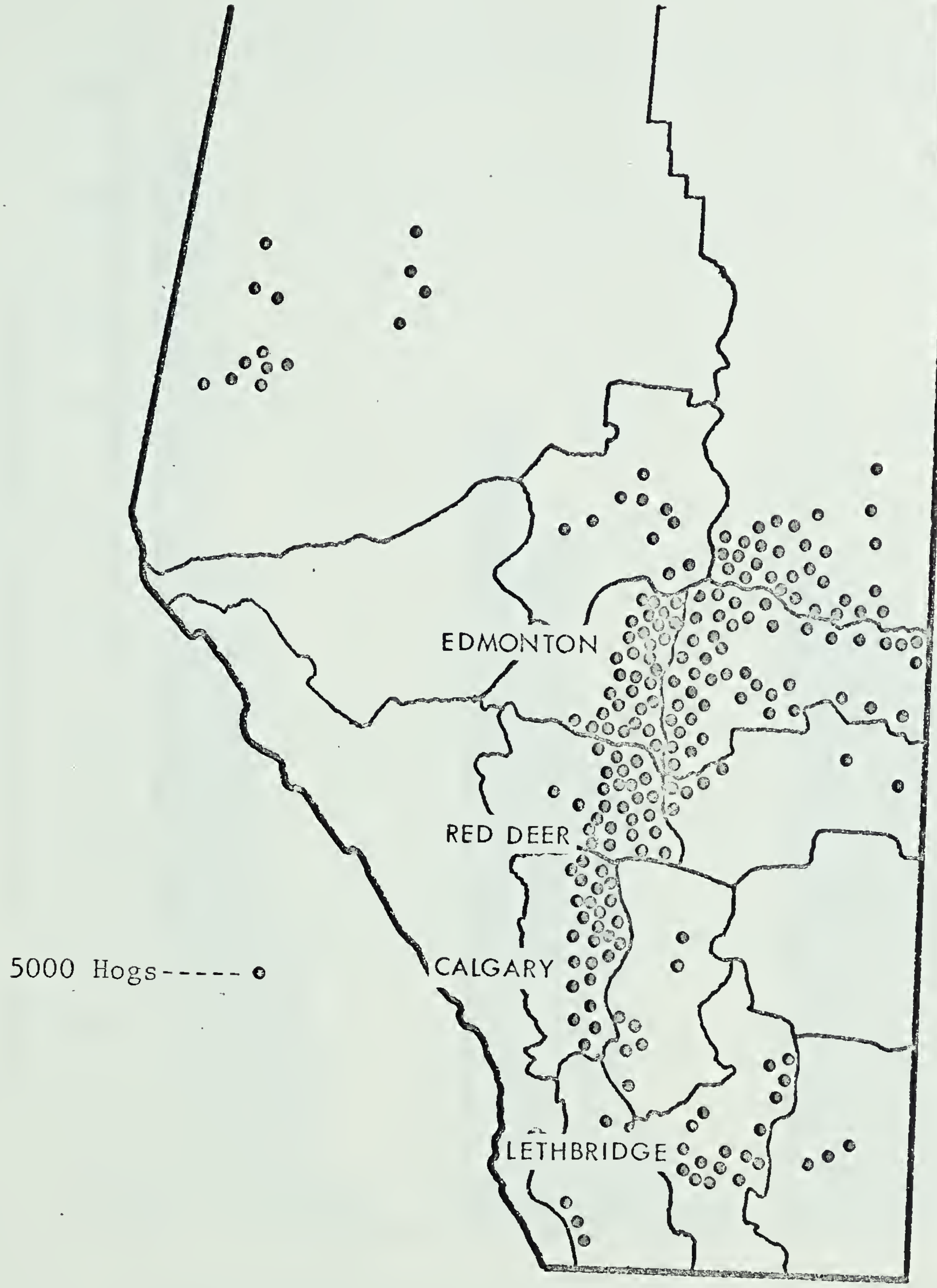

Figure 6

DISTRIBUTION OF HOG PRODUCTION, ALBERTA, 1965

Source: Calculated from Alberta, Dept. of Agriculture, Farm Economics Branch, "Estimated Number of Hogs on Farms in Alberta by Agricultural Reporting Areas, Dec. 1, 1964 and 1965," (Misc. Table), (Edmonton: Feb. 1, 1966).

Figure 7

PERCENTAGE OF FARMS REPORTING VARIOUS LEVELS OF HOG INVENTORIES, ALBERTA, 1951, 1956, 1961

Source: Census of Canada, Vol.V, Part 3,(Alberta), Table [illegible]. [illegible].

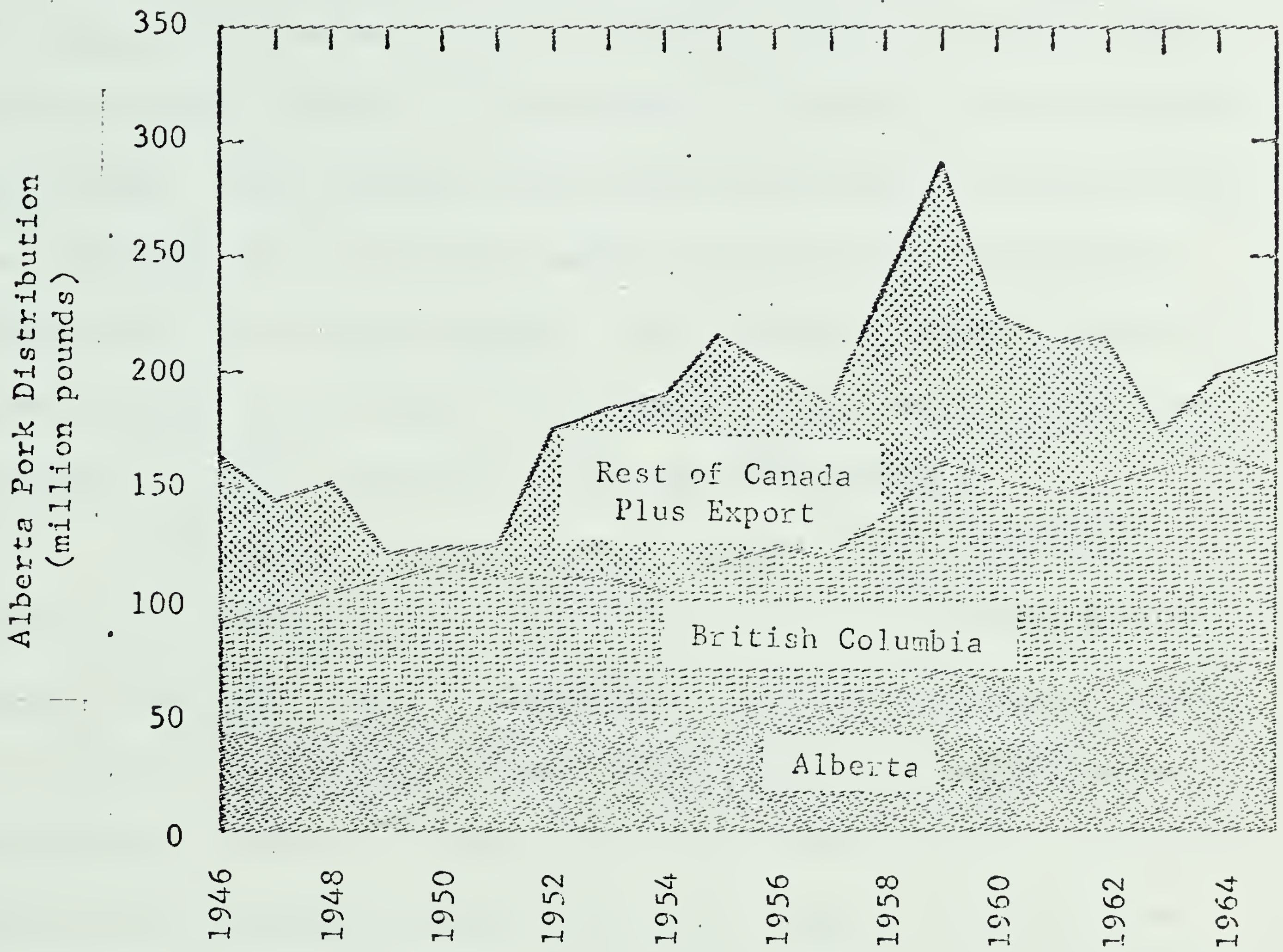

FIGURE 8

ESTIMATED DISAPPEARANCE OF ALBERTA'S PORK PRODUCTION AMONG ALBERTA, BRITISH COLUMBIA, AND OTHER; 1946-1965

Source: Calculated from Canada, D.B.S., "Livestock and Animal Products Statistics," (Ottawa: Queen's Printer) 23-203.

British Columbia imports Alberta pork both as pork carcasses and as live hogs. The hogs purchased are slaughtered in meat packing plants located in the Vancouver area. Until 1959 more than 50 percent of the pork imported into British Columbia was in the form of live hogs. Since then several of the major meat packing firms have closed their Vancouver plants in favor of slaughtering at locations closer to major supply areas. The closing of these plants has resulted in both a relative and a real decrease in the number of hogs moving into British Columbia from Alberta for slaughter. The estimated share of pork imported into British Columbia from Alberta as hogs has decreased from 70 percent in 1955 to about 25 percent in 1965 (Figure 9).

In summary, the hog and pork industry is becoming more specialized and concentrated. Retailing is more concentrated with the growth of the chain stores. Slaughtering and meat packing are carried out primarily by the larger firms. Hog production is becoming more concentrated on fewer but larger, more specialized farm units. In addition, the increasing urbanization of the Canadian population is resulting in a greater concentration of meat consumption which directly determines the market for pork and pork products.

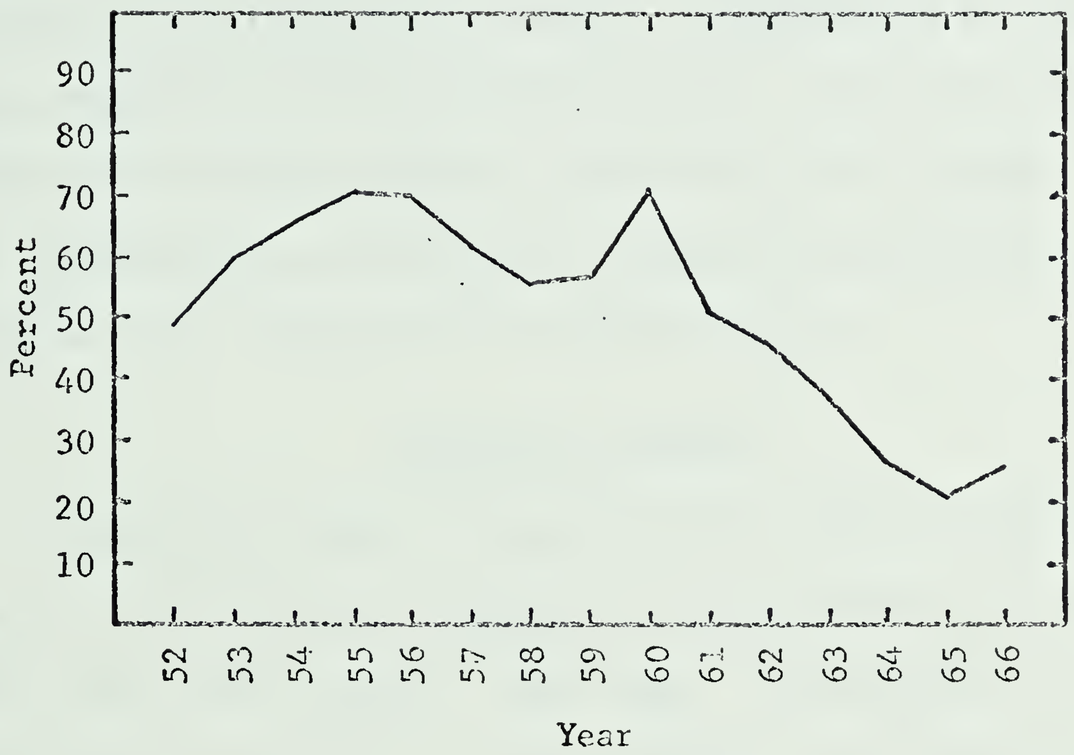

FIGURE 9

ESTIMATED SHARE OF THE PORK IMPORTED INTO BRITISH COLUMBIA FROM ALBERTA AS LIVE HOGS, 1951- 1965

Source: Calculated from Canada, Dept. of Agriculture Production and Marketing Branch, "Annual Livestock Market Review," (Ottawa); Canada, D.B.S., "Livestock and Animal Product Statistics, Annual," (Ottawa: Queen's Printer) 23-203.

Chapter IV

PROCUREMENT PRACTICES

Market Agencies

Slaughter hogs move to meat packing plants through a variety of different types of marketing agencies. The more important marketing agencies were: (1) the terminal markets, including the livestock exchanges and commission firms operating there, (2) private shippers, (3) cooperative livestock shipping associations, (4) truckers, and (5) meat packing plants including the livestock buying stations owned and operated by the individual meat packing plants.

Marketing Channels

A marketing channel consists of the sequence of agencies involved in the marketing of a product. In the marketing of hogs there were four basic flows involved. They were: (1) ownership, (2) negotiation, (3) physical possession, and (4) payments. The "ownership" flow was short and direct in hog marketing because the actual title passed directly from the producer to the meat packing firm in nearly all cases. The "negotiation" flow was usually quite direct, involving only the producer and the meat packing company but it became more complicated when intermediate marketing agents were involved. The intermediate agents that most frequently entered into the negotiation proceedings were private shippers, order buyers, commission firms and/or livestock exchanges. Normally only one intermediate marketing agent became involved in any sale. The "physical possession" flow could also be quite direct, with

the producer delivering his hogs directly to the packing plant. Intermediate marketing agents that also became involved in the physical possession flow included truckers, shippers, cooperative livestock shipping associations, and commission firms. "Payments" also followed a variety of channels. The most direct channel was for the meat packing company to make payment to each producer individually. Private shippers, cooperative livestock shipping associations, and/or commission firms, in a number of cases became intermediaries in the payment channel. In such instances the meat packing company provided the marketing agent with the payment for the total lot of hogs delivered along with the government premiums and the necessary information for the marketing agent to make payment to each producer. The shorter the sequence of agents involved, the more likely that the different flows followed the same channel. For example, hogs delivered directly to a meat packing plant by the producer may have involved no intermediaries in any of the flows, while hogs sold through the terminal market could have involved intermediate marketing agents in the negotiation, physical possession, and payments channels (Figure 10).

Terminal Markets

The terminal market is the livestock exchange through which the marketing mechanism operates. The physical facilities for marketing were provided by the stockyards. Public stockyards operate under the "Livestock and Livestock Products Marketing Act" of the Government of Canada. They are subject to inspection by the Health of Animals Branch, Canada Department of Agriculture. The weighing facilities of the yards are inspected regularly by the Department of Trade and Commerce under

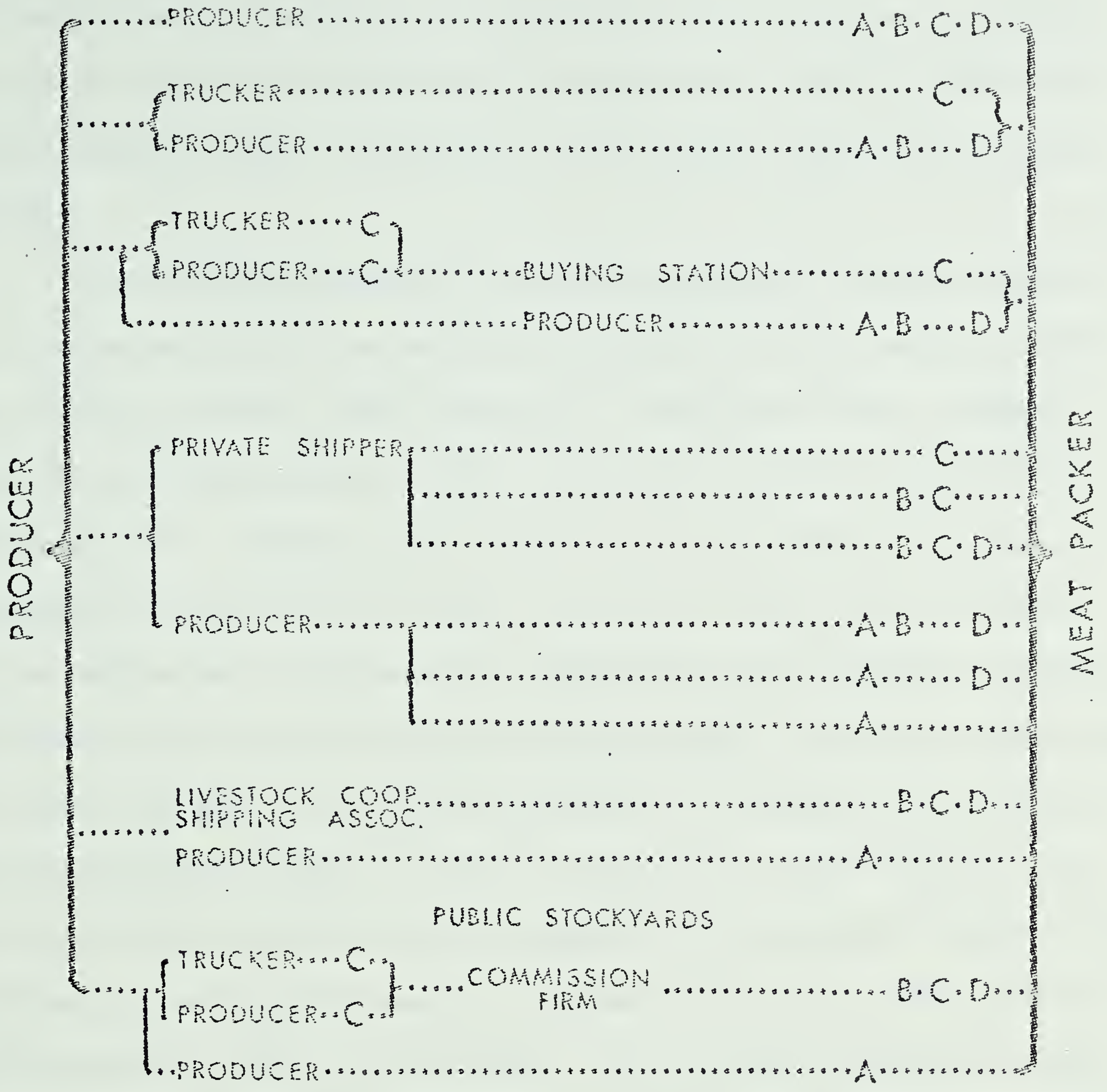

FIGURE 10

MARKET CHANNEL FLOWS IN THE MARKETING OF HOGS THROUGH THE MAIN MARKET AGENCIES, ALBERTA

OWNERSHIP .... A

NEGOTIATION .... B

PHYSICAL POSSESSION C

PAYMENT .... D

the "Weights and Measures Act". The staff of the Production and Marketing Branch of the Canada Department of Agriculture collects, tabulates, and disseminates market information on the various classes of livestock marketed.

The public stockyards are owned by private stockyard companies. These companies provide the necessary facilities for the assembly, sale, and shipping of cattle, hogs, and sheep. The income of the stockyard companies was derived from a rental charge for the facilities and services provided. Although anyone could use the facilities of the public stockyards to buy, sell, and handle livestock, usually both the buyers and the sellers were professionally represented on the market. The livestock owner sold his livestock by consigning them to any of the commission firms that operated on the public stockyards. Commission firms also purchased livestock for buyers, that is, they acted as order buyers. The majority of the livestock sold for slaughter at the public stockyards was purchased by meat packing companies through their own or independent professional buyers called "order buyers". The stockyard companies, commission firms, or order buyers did not take title to the livestock consigned, but provided their facilities and services for a fee.

There were two types of livestock received at the public stockyards--livestock consigned for sale and livestock consigned on a "through-billed" ticket. Livestock consigned to the public stockyards on a "through-billed" ticket did not change ownership at the public stockyards. They were livestock in transit to another location that had been unloaded at the public stockyards for any of a number of reasons, such as for feed, water, and rest, assembly and regrouping, or health inspection before

being reloaded for shipment to their destination.

Livestock to be sold at the terminal market were usually consigned to a commission firm that performed the selling function. The commission firms sold the livestock by a number of private treaty arrangements or by public auction. Public auction usually referred to the auction ring procedure of selling whereby each lot of livestock was offered for sale on a competitive bid basis to all potential buyers. In Alberta there are terminal markets located at Edmonton, Calgary, and Lethbridge. The total number of hogs sold was not very large (Table 1).

Edmonton Livestock Exchange

All hogs consigned to the commission firm of the Alberta Livestock Co-operative (A.L.C.) were offered for sale by public auction. The price for which these hogs sold was the officially recorded price for the Edmonton terminal market. Butcher hogs consigned to two other commission firms in Edmonton were not sold at public auction. Both commission firms acted as order buyers for two separate meat packing plants at Vancouver. Butcher hogs consigned to both firms were purchased and shipped to the respective Vancouver meat packing plants. The producers usually received the same price for their hogs as those sold by public auction. All producers selling hogs through the Edmonton Livestock Exchange paid a 25 cent per head yardage fee to the stockyards company and a 30 cent per head selling fee to the commission firm handling their hogs. The 55 cent per head charge for butcher hogs amounted to about 35 cents per hundredweight on a dressed weight basis.

Hogs passing through the Edmonton public stockyards on a "through-billing" ticket were not charged a selling fee. The stockyards

Table 1

SLAUGHTER HOGS CONSIGNED TO TERMINAL STOCKYARDS IN ALBERTA, 1965

Type of Consignment	Terminal Stockyard			Total
	Calgary	Edmonton	Lethbridge	
	(Number of hogs)			
Sale	53,505	53,414	38,013	144,932
Through bill	45,347	48,553	15,419	109,319
Total	98,852	101,967	53,432	254,251

Sources: Canada Department of Agriculture, Production and Marketing Branch, "Calgary Annual Livestock Market Report, 1965" (Calgary: 1966).
"Edmonton Annual Livestock Market Report, 1965" (Edmonton: 1966).
"Lethbridge Annual Livestock Market Report, 1965" (Lethbridge: 1966).

company did charge the owners of through-billed hogs 25 cents per head up to a maximum of $10.00 per load for assembly and loading services. Additional charges were levied for feed and other services if these were used.

Calgary Livestock Exchange

All hogs consigned to commission firms at the Calgary terminal market must be offered for sale according to the rules and regulations of the Calgary Livestock Exchange. There is nothing in the rules and regulations of the Calgary Livestock Exchange that prohibits sale by private treaty or any other method, provided that the livestock are offered for competitive sale. During 1965 the sales agencies used the public auction method of selling livestock. The average price at which these hogs were sold became the officially recorded price for hogs at the Calgary terminal market.

All producers selling hogs through the Calgary terminal market paid a 20 cent per head yardage fee to the stockyards company and a 35 cent per head selling fee to the commission firm handling their hogs. This 55 cent per head amounted to approximately 35 cents per hundredweight on a dressed weight basis. Hogs consigned on a through-billing ticket were handled similarly to the through-billed hogs at Edmonton public stockyards.

Lethbridge Livestock Exchange

The Lethbridge situation differed from that at Calgary and Edmonton in that there were no major meat packing plants slaughtering hogs in Lethbridge. Several small firms killed a few hogs. The majority of hogs passing through the Lethbridge public stockyards were moved to

Vancouver for slaughter. A smaller number also went to Calgary for slaughter. Occasionally hogs from the Lethbridge public stockyards moved to Regina, Winnipeg, or even to Portland, Oregon.

Farmers shipping hogs to the Lethbridge public stockyards could sell their hogs directly to one of the three packing plant buyers located at the public stockyards, or they could consign their hogs to the Southern Alberta Livestock Co-operative, a commission firm operating at the public stockyards. Hogs consigned to the commission firm were sold by means of a sealed bid. The firm submitting the highest bid purchased all of the hogs offered. The price paid by the successful firm became the official price for the Lethbridge terminal market. Hogs sold directly to packing plant buyers stationed at the Lethbridge public stockyards were usually sold at the official terminal market price.

Direct Consignment to a Meat Packing Plant

Direct to a Meat Packing Plant Gate

Shipping directly to the meat packing plants was the most direct method producers could use to market their hogs. The hogs were transported directly to the plant gate by either a producer in his own truck or by a trucker who was operating as a trucker only and not also as an agent at the meat packing plant. Hogs marketed this way were referred to as producer directs. All eight of the major meat packing plants in Alberta slaughtering hogs accepted consignments directly from producers at their plants. Delivery direct to the plant gate was economically feasible only to those producers located within a certain radius of the plant.

The prices paid for hogs delivered directly to the meat packing plants were normally based on the terminal market's recorded price. The basic price for hogs delivered directly to all Edmonton packing plants was the same as the price recorded at the Edmonton terminal market. For several years previous to August 1965, the Calgary meat packing plants had established the price for hogs delivered directly to their plant gates at 35 cents per hundredweight under the recorded Calgary terminal market price. This was done to encourage producers to market through the terminal market.

At times the meat packing plants have offered producers a special inducement to ship in time for a Monday kill. The producers have also been given procurement inducements to ship regularly to certain plants. Such arrangements were usually made by the packers with the larger producers. Price variations offered as procurement inducements include:

(1) Actual price incentives such as

- (a) a slight bonus over the daily terminal market price
- (b) giving the producer the option of several prices,
  - (i) higher price of any two specified days of the week
  - (ii) the price recorded at the terminal market for any particular day of the week,
  - (iii) average of two or more days of the week,
  - (iv) the high price of the week, and
  - (v) various other price arrangements.

(2) Quasi-price incentives such as the packing plant's truck picking up the producer's hogs at his farm and charging the producer a token or no shipping fee.

(3) Non-price incentives such as advertising, public relations, and the giving of substantial cash advances to the producer at time of delivery.

It should be restated that many of the practices followed in hog procurement were relatively short term in nature. Changes occurred frequently, particularly for price and quasi-price inducements. The number and value of the procurement incentives varied with market conditions and the level of competition for hogs between the different packing plants.

Edmonton meat packing firms have frequently encouraged a more even distribution of weekly hog marketings. Monday deliveries were usually small because hogs assembled in the country on Monday normally did not arrive at the plants until Tuesday. Also many producers located closer to Edmonton preferred to hold their hogs until a price had been established. On occasion the plants offered various price and quasi-price inducements to the producers for marketing their hogs in time for a Monday slaughter. The plants wanted a more even distribution of weekly hog marketings in order to make more efficient use of labor and plant facilities on Mondays and to reduce the amount of overtime necessary during the middle of the week.

Direct to a Livestock Buying Station

Direct shipment to livestock buying stations owned and operated by a meat packing plant was in many respects very similar to selling directly at the packing plant gate. The producer selected the company to which he wished to sell his hogs by selecting the buying station. These livestock buying stations were owned and operated by individual meat

packing plants under their company name. Each of the four major meat packing plants in Edmonton and the major meat packing plant in Red Deer operated livestock buying stations in the Edmonton supply area. Packer owned and operated livestock buying stations were located both in or near the city of Edmonton along major highways and at country locations throughout the Edmonton supply area. No livestock buying stations as such operate in the Calgary area. Buying stations operated by private shippers and shipping associations were normally called gathering or assembly stations.

The prices paid at the packer owned and operated buying stations varied with distance and direction from Edmonton. At buying stations in or around Edmonton the basic price was usually the same as the Edmonton terminal market price. Price variations were similar to those outlined for hogs consigned directly to the plant gate. The producers were not usually charged for transporting the hogs from the buying station to the plant.

Meat packing companies operating buying stations at country points some distance from Edmonton usually attempted to pay the plant gate price less freight. The packing firms located buying stations in relatively choice supply areas or along major delivery routes and thus were in competition with one another as well as with local livestock shipping associations and private shippers, particularly those assembling hogs for rival firms. The degree of competition between the different firms, especially when hogs were in short supply, normally resulted in the prices paid for country hogs being higher than the Edmonton plant price less freight. The importance of buying stations was indicated by

the fact that during 1965 they were responsible for 21 percent of the hogs procured by the four major Edmonton packing plants in the Edmonton supply area (Table 2).

Livestock Shippers

Shippers were individuals or organizations making a business of assembling hogs into lots to forward to the various meat packing plants. In addition to assembling or gathering hogs from producers, the shippers could also perform a number of other services, such as transporting the hogs to the packing plant, tattooing, filling out manifests, and distributing hog payments to the individual producers. The usual procedure for making payment was for the packing plants to make payment directly to the producers, but a number of shippers performed this function for the plants. The packing plants forwarded the necessary information along with the government premiums and a cheque for the total shipment to these shippers. The shipper then paid the individual producers. The shippers received a commission from the packing plants for performing these services. The size of the commission depended on the number of services performed. The two major classes of shippers operating in Alberta were: livestock shipping associations, and private shippers.

Cooperative Livestock Shipping Associations

Farmers in various areas of the province have formed local livestock shipping associations for the purpose of assembling and selling their hogs on a cooperative basis. The associations have established local assembly yards to which members deliver their hogs. The hogs were

Table 2

PERCENTAGE OF HOGS PROCURED AND SLAUGHTERED BY EIGHT MAJOR MEAT PACKING PLANTS ACCORDING TO THE MARKETING AGENCY, ALBERTA, 1965

Marketing Channel	Supply Area		
	Edmonton	Calgary	Alberta
		(percent)	
Livestock exchanges[a]	0.1	9.6[b]	2.5
Direct to the packing plants	15.1	24.7	18.7
Direct to buying stations	21.0	-	14.9
Livestock shippers			
Livestock cooperative shipping association	18.8	13.1	18.0
Private shippers	45.0	52.6	45.9
Total procurements	100.0	100.0	100.0

[a] The livestock exchanges were located at Edmonton, Calgary, and Lethbridge.

[b] The 9.6 percent was composed of 6.9 percent from the Calgary Livestock Exchange and 2.7 percent from the Lethbridge Livestock Exchange.

then offered for sale in groups. To further facilitate selling their hogs, the local livestock shipping associations have formed a central selling agency called the Alberta Livestock Co-operative (A.L.C.). Practically all of the local livestock shipping associations marketed their hogs through the A.L.C.

In the past the A.L.C. sold the hogs from the livestock shipping associations (referred to as A.L.C. country hogs) by various methods. The A.L.C. country hogs were usually sold by public auction at the Calgary and Edmonton terminal markets during 1965. On several occasions the A.L.C. country hogs from certain livestock shipping associations were shipped and sold at Winnipeg. In 1966 the majority of the A.L.C. country hogs were contracted directly to certain meat packing plants. The sale price was established by a formula price 40 cents per hundredweight above the higher of the Calgary, Edmonton, or Winnipeg terminal market price less $2.00. Because the A.L.C. country hogs were sold on the basis of f.o.b. country point, the price producers received was the formula price less a freight allowance from their local assembly station to either Edmonton or Calgary, whichever was closer. In areas where livestock shipping associations were operating, the price which their members received for hogs was generally recognized as the prevailing price in that area.

Private Shippers

Each of the eight major meat packing plants in Alberta had private shippers throughout their supply areas. During 1965 private shippers collected 45 percent of all hogs produced in Alberta and slaughtered by the eight major meat packing plants (Table 2). Private shippers also

accounted for the majority of the through-billed hogs passing through the public stockyards.

The private shippers were usually called "agents" or simply "shippers" by the trade. The range of services performed by the private shippers varied widely. Many of the private shippers were truckers who maintained the agency along with their regular trucking business. The regular trucking business was actually complementary to hog procurement because it provided them with regular farmer contacts. With these contacts the private shipper could keep track of who was raising hogs and when the hogs would be ready for market. A number of shippers also operated in conjunction with local country auction markets, making use of the facilities to assemble and group the producer's hogs. Other shippers operated from their own or rented assembly stations. In nearly all cases the shippers established certain days of the week on which they regularly assembled and forwarded hogs to the packing plant.

For performing these services, the packing plants paid the shippers a commission. The size of the commission, as stated previously, depended on the number of physical services which the shipper was performing for the plant. A clear distinction should be made at this point between "commissions" and "procurement incentive payments". Commissions were actual expenditures for physical services rendered. Procurement incentive payments, also called "trucker bonuses", "freight assistance payments", and various other terms were not related to the physical services performed as such but were payments for procurement services. The existence and the size of the procurement incentive payments were a function of the degree of competition for hogs in a particular area and the

bargaining power of the private shipper. The actual amount paid in procurement incentive payments or the rate of payment to any particular shipper was variable.

The price producers received for hogs procured by the private shippers was usually something above the plant gate price less freight costs. Prices varied also according to the area and the degree of competition for hogs in each area. Because of differences in competition, it was speculated that the variation in prices between different areas was reflected more in procurement costs such as procurement incentive payments than in the actual prices received by producers for their hogs.

Chapter V

TERMS OF TRADE

Factors Involved in Negotiating the Terms of Trade

The negotiation of the terms of trade or terms of exchange plays an important role in marketing. In the marketing of hogs a number of factors that were involved in negotiation included: (1) the sale price, (2) agreement on the allowances and incentives to be included or added to the sale price, (3) time and place of delivery of the hogs, (4) basis of price settlement, (5) settlement, when and by whom, (6) other services or benefits that are either implicitly or explicitly included.

The sale price for the majority of market hogs sold in Alberta was based on the price established at the terminal markets. Usually procurement allowances or bonuses were added to the terminal market price. The pattern that these bonuses took was outlined previously. For hogs sold through the terminal market the time of delivery was left to the discretion of the producer and/or trucker. The place of delivery was the public stockyards. When hogs were consigned directly to a packing plant price incentives were occasionally offered for prearranged delivery. In some cases a meat packing firm also agreed to pay part or all of the transportation costs. If the shipper was acting as an intermediate marketing agent he usually designated the time and place of delivery. This was true for both private shippers and livestock shipping associations.

Settlement in most cases was made on the basis of dressed weight and grade. The market price was quoted for A grade hogs. For other grades the following schedule of price differentials had generally been in use since the inception of the amended Hog Carcass Grading Regulations, October 5, 1959.[1]

Canada Grade A	Basic Price
Canada Grade B	$1.00 discount per hundredweight
Canada Grade C	$3.00 discount per hundredweight
Canada Grade D	Market value
Canada Light	$3.50 discount per hundredweight
Canada Heavy	$3.25 discount per hundredweight
Canada Extra Heavy	Market value
Canada Ridgling	$7.00 discount per hundredweight
Canada Sows and Stags	Market value

Generally, the meat packing plants attempt to slaughter hogs on the day of delivery. An additional one percent of the dressed weight was added to the final weight for every day that the hogs were held over. Several plants importing hogs from Alberta for slaughter in British Columbia used an alternative method in compensating for shrinkage. They guaranteed a dressed weight of 78 percent based on the live weight of the hogs at the Alberta assembly point.

Negotiations also involved agreement as to when settlement was to be made and by whom. Full settlement was normally made after slaughter.

---

[1] Personal communication with Mr. J. E. Fetherstonhaugh, Former Officer in Charge, Production and Marketing Branch, Canada Department of Agriculture, Edmonton, Alberta.

Producers were also given the alternative by packers and certain private shippers of accepting an initial payment at the time of delivery. The final payment was then made after the hogs had been graded. Payment could be made directly to the producer by the meat packing plant or through the agent handling the hogs. When private shippers were involved the meat packing firms usually made the payment directly to the producers. Only the larger private shippers become involved in settlements. Producers who marketed their hogs through livestock shipping associations normally received their payments from the shipping association or their marketing agency, the A.L.C.

Other services or benefits were implicitly or explicity included in the negotiation. Included in this category was the distribution free of charge to producers of current market news and information and the distribution of patronage dividends from livestock shipping associations to members. All these factors were important elements in determining the net income of producers. The most important factor was the base price.

Establishment of the Base Price

The base price for hogs in Alberta was the sale price of hogs sold by competitive bid at each of the terminal markets. The Calgary terminal market was the most influential for three reasons. The first reason was that all hogs consigned for sale through the Calgary terminal market had been offered for sale on a competitive basis. During 1965 this involved selling the hogs by public auction. A second reason was that the Calgary auction sale for hogs was held before either the Edmonton or Lethbridge sales. The Calgary sale took place shortly after 1:00 p.m., the Edmonton sale about 1:30 p.m., and the sealed bids at Lethbridge were

opened at 2:30 p.m. The similarity in the daily prices at each terminal suggests good communication occurred between the participants operating in each. The Edmonton market price seldom varied more than ten cents per hundredweight from the Calgary market price. The Lethbridge market price for butcher hogs was usually the Calgary market price less freight charges. The major exception was on Mondays when hogs arrived in sufficient numbers at the Lethbridge stockyards to enable the assembly of carload lots for shipment to Vancouver. The price paid for hogs moving to Vancouver for slaughter was usually slightly above the Calgary market price. Retailers were able to obtain a premium price for pork slaughtered in Vancouver.

The Calgary terminal market was the most influential in establishing the base price for hogs in Alberta since 12.5 percent of all hogs sold in the Calgary area during 1965 were sold by public auction.[1] This percentage was considerably larger than in Edmonton where only about two percent of the total supply of hogs were offered for sale by public auction. While 12.5 percent of the total supply of hogs sold by competitive bid appears to be small, it was sufficient to encourage the local meat packing plants to bid regularly for these hogs. During 1965 the three major meat packers in Calgary obtained 6.9 percent of their total supplies from the Calgary terminal market (Table 2). Approximately one-half of the hogs sold on the Calgary livestock exchange were purchased by Calgary meat packing plants. The majority of the remaining hogs were purchased by Vancouver meat packing plants.

---

[1] The 12.5 percent was the percentage of the total number of Calgary-marketed hogs that were sold through the Calgary terminal market in 1965. Calculated from Canada Department of Agriculture, Production and Marketing Branch, "Calgary Annual Livestock Market Report, 1965," (Calgary: 1966).

The base price for the Edmonton area as influenced by the Calgary sale was established by the public auction sale at the Edmonton terminal market. Local meat packing plants in Edmonton did not consider the public auction an important source of hogs because of the small number sold there. Almost one-half of the slaughter hogs sold at the Edmonton livestock exchange in 1965 were marketed by public auction.[1] Of this number only 5,050 hogs were purchased and slaughtered in Edmonton.[2] The remainder of the hogs were sold to out of province buyers, with the majority going to British Columbia. A small number of these hogs were also sold to Ontario and United States meat packing plants.[3]

In summary, the negotiation of the terms of trade for market hogs involved a number of factors which included the establishment of a base price. The Calgary terminal market was the most important of the three terminal markets located in Alberta.

---

1 Communication with Mr. H. Winkelaar, Manager, Alberta Livestock Co-operative, Edmonton, and Mr. B. R. Triscott, General Manager, Western Stockyards Limited, Edmonton.

2 Canada Department of Agriculture, Production and Marketing Branch. "Edmonton Annual Livestock Market Report, 1965." (Edmonton: 1966) 4.

3 *Ibid.*, 9.

Chapter VI

EVALUATION OF MARKET PERFORMANCE

The performance of the marketing system involves both market functions and market goals. The functions of the marketing system should operate to aid individuals and groups to achieve desired goals. Evaluation of market performance is concerned with the extent that these goals are achieved.

Goals

Individuals and groups trading within the marketing system and society in general should have as an overall goal the achievement of optimum marketing efficiency and economic equity. Difficulties arise because different groups within society have different interpretations of the kinds of goals desired. The following important goals have been selected for this study from the viewpoint of hog producers. At the same time the goals should be consistent with the best interest of society.

(1) That producers be responsive within the limitations of the possibilities of production and production techniques to both quality and quantity preferences of consumers for pork and pork products.

(2) That buyers and sellers be equally and adequately informed of market conditions and each should be able to make prompt and intelligent responses to changing market conditions.

(3) That marketing charges be based on the actual costs and normal profits. That costs be as low as possible for the services supplied.

(4) That physical procurement be as efficient as possible with a minimum of loss.

(5) That marketing systems promote the growth of the industry and encourage the development and adoption of improved marketing services and techniques.

Functions of the Marketing System

The functions of the Alberta hog marketing system are to provide the necessary services for the selling of hogs. These services can be divided into three groups dealing with (1) the functions of exchange, (2) the physical movement of hogs, and (3) the facilitating functions.

Functions of Exchange

The basic functions of exchange were the negotiation of the terms of trade, the transfer of title, and the making of payments. Good market performance requires that the basic functions of exchange occur quickly and efficiently, that prices agreed upon reflect the true value of the goods and services provided, and that no price discrimination occurs.

Negotiation of the terms of trade involved such factors as the net sale price, the time of delivery, and the time and means of payment. The net sale price was composed of the base price less selling costs plus procurement bonuses. The efficiency with which the basic price was established was difficult to determine directly because of the lack of any standards for comparison. One way of evaluating the efficiency by which the base price was established was to compare the price of a similar product in a related market along with

the factors that influenced pricing in each. The price for hogs of a given quality should not differ by more than the transfer costs between any two market centers. This principle by itself was not sufficient for any conclusions to be reached as to what the price differential should have been at any given time. Local supply and demand conditions for pork and the various pork cuts were important factors in determining price differentials between related markets. Alberta is in the rather fortunate position of being situated between two large markets. Vancouver is the larger and steadier market, but Eastern Canada is also important. The price difference between the Toronto and Edmonton markets for A grade hogs varied from a maximum level, approaching the cost of transferring Alberta hogs live to Toronto, to a minimum when only a small price difference existed (Figure 11). The freight rates for both hogs and dressed pork between Edmonton and Toronto varied according to the size of the shipment. The freight rate on a dressed weight basis for a 30,000 pound load of live hogs was about \$2.86 per hundredweight (Table 3). For a 33,000 pound load of pork carcasses the freight rate was somewhat less at \$2.61 per hundredweight dressed weight basis (Table 4). Transfer costs for hogs shipped live must also include the costs of shrinkage, bruising, death loss, and feed and water required in transit.

The Calgary Livestock Exchange was the most influential in establishing the base price for hogs in Alberta. Both the Edmonton and Lethbridge prices were related to the Calgary terminal market price. The Calgary market price could have been improved if a larger proportion of the hogs in the Calgary supply area had been sold through its terminal. There was some indication that the Vancouver meat packing plants would

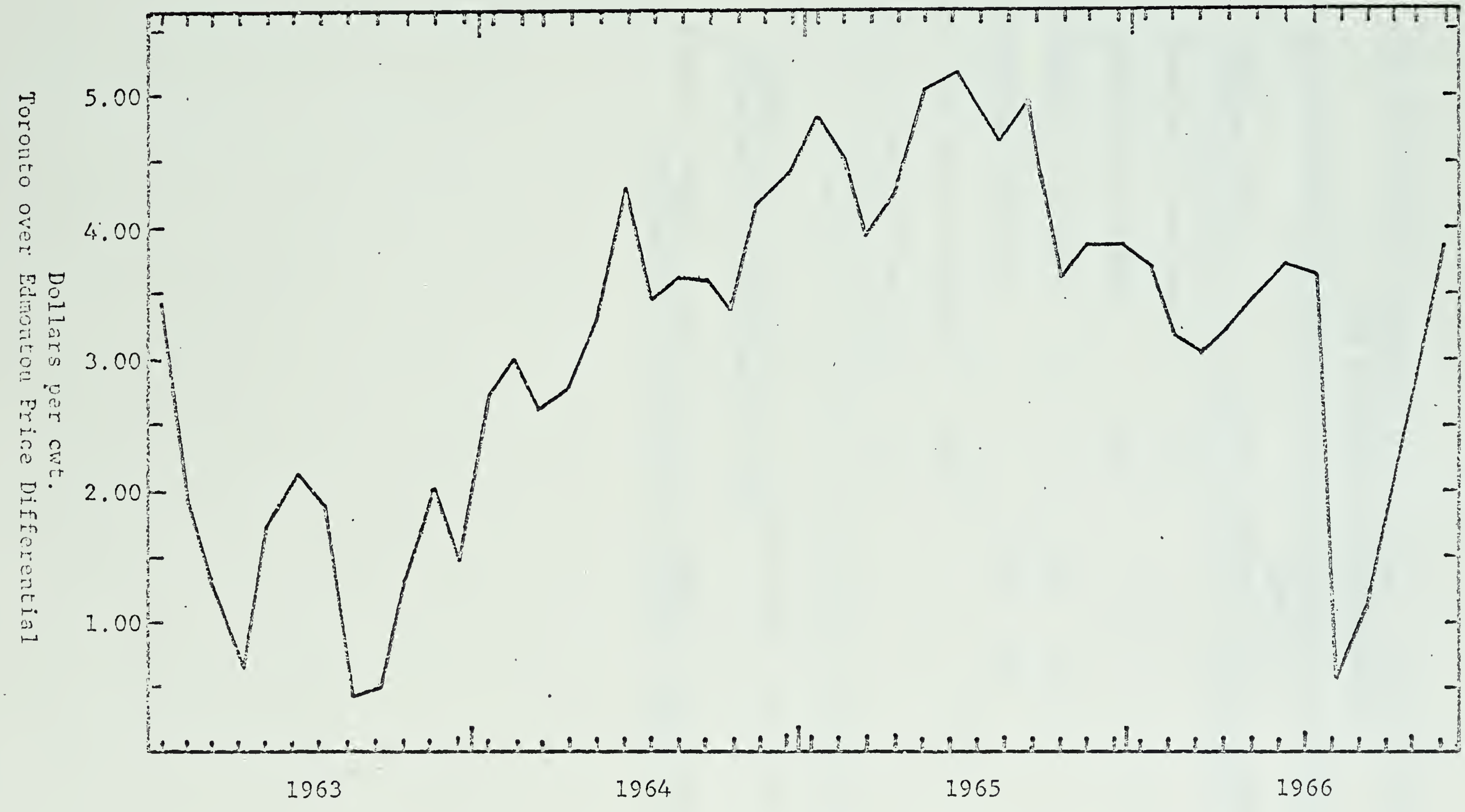

Figure 11

EDMONTON - TORONTO PRICE DIFFERENTIAL FOR GRADE A HOGS, 1963-1966

Source: Calculated from Canada, Dept. of Agriculture., Production and Marketing Branch, "Annual Livestock Market Review," (Ottawa).

Table 3

FREIGHT RATES FOR LIVE HOGS PER 100 POUNDS, BETWEEN SELECTED LOCATIONS FOR DIFFERENT CARLOAD WEIGHTS[a]

	(pounds)					
Minimum Weight	16,000	20,000	23,000	24,000	26,000	30,000
Edmonton to Vancouver	1.81					
Edmonton to Winnipeg	1.86					
Edmonton to Toronto		3.28	3.11		2.95	2.86
Winnipeg to Toronto		2.26	2.14		2.03	1.96
Ft. St. John to Edmonton	1.95					
Ft. St. John to Vancouver	1.50					

[a] Freight rates are quoted on a dressed weight basis using a 78 percent dress out on a 200 pound live hog.

Source: Communication with Mr. W. A. Dunbar, Freight Sales Manager, Canadian National Railways, Edmonton, Alberta, September, 1966.

Table 4

FREIGHT RATES FOR PORK CARCASSES PER 100 POUNDS, BETWEEN SELECTED LOCATIONS FOR DIFFERENT CARLOAD WEIGHTS

	(pounds)							
Minimum Weights	20,000	25,000	28,000	30,000	33,000	35,000	36,000	42,000
Edmonton to Vancouver	1.80			1.55		1.44		
Edmonton to Toronto		3.51	3.32		3.21		3.07	3.01
Winnipeg to Toronto		2.20	2.07		1.98		1.88	1.84

Source: Communication with Mr. W. A. Dunbar, Freight Sales Manager, Canadian National Railways, Edmonton, Alberta, September, 1966.

have been willing to bid slightly higher for hogs than they did. It is suggested that they were inhibited because several of the firms also had Alberta plants using the Calgary market price as a base price. The Lethbridge terminal market price was not widely used as a base price. Because of this the meat packing firms bid slightly higher for hogs to be slaughtered in Vancouver.

Interdependence of the different terminal market for hogs strengthened the overall pricing efficiency. Prices established at any single terminal did not deviate widely from those at other markets whenever it was possible to shift hogs from one terminal to another. It appeared that the establishment of hog prices at the various terminal markets did reflect changes in general demand and supply conditions adequately. While only a small percentage of the total supply of hogs sold were actually marketed through the terminal markets, the price levels established were used as the base price for a large share of all hogs marketed.

The major problem with the system of marketing was that more emphasis was placed on non-price and quasi-price procurement policies than on direct price competition. Such competitive practices tended to obscure the real sale price and led to variations in prices received by different producers for similar quality hogs. These price deviations arose primarily because of differences in the bargaining power of marketing agencies. Producers who supported the terminal markets at Calgary and Edmonton appeared to receive the lowest net price. The highest net price was received by producers who marketed their hogs through private shippers. This was so, particularly when these shippers exercised con-

siderable bargaining power and who returned the greater part of the profits obtained from this market power to their customers. The distribution of market power between private shippers varied considerably from little more than that held by the average producer to the private shipper who controlled the marketing of the majority of hogs in his area. In such cases the private shipper was often able to place one packer against another for a premium deal. The net price that the producer received also depended on the amount of competition that the individual shipper faced for hogs in his own area. If the producers had good alternatives through which to market their hogs, the private shippers were more or less forced to redistribute the greater part of the benefits received to their customers.

The Alberta Livestock Co-operative as the marketing agent for most of the livestock shipping association hogs was in a relatively strong bargaining position because they handled about 20 percent of all hogs marketed. The price at which the local shipping association hogs sold usually became the common price for all hogs marketed in the area.

In general, each producer wished to receive the highest price for his hogs, and, if possible, he would like it to be above the reported price which he probably viewed as an average price. Under the system of marketing hogs in Alberta it was possible for most producers to receive more than the reported price because the reported price was actually a base price onto which various procurement incentives were added. In most cases the procurement bonuses were added to the base price according to the amount of market power the marketing agent possessed. The uneven distribution of market power between different marketing agents resulted in pricing being inequitable. The inequality in the net prices received by

different producers could not be fully justified by differences in the quality of the hogs, services included, or the cost of marketing the hogs. Some producers and/or marketing agents received more than they should for the goods and services provided, while other producers did not receive a fair price as a result of their poorer bargaining position. If the system of marketing hogs could be altered to eliminate the array of different marketing agencies operating in the same area, the actual expenditure incurred by packers for hogs probably would change very little, but producers could expect somewhat higher and more equitable returns.

Negotiating the time of delivery was another important factor. With the system, time of delivery was left to the discretion of the individual producer and the marketing agent. This resulted in the majority of hogs being marketed on Tuesdays, Wednesdays and Thursdays. In Calgary heavy marketings during the middle of the week was not as much of a problem as in Edmonton where considerably more hogs were slaughtered. In fact, all of the major plants in Edmonton encourage Monday deliveries to avoid unnecessary gluts and overtime. The marketing system could be improved by any arrangement whereby a more even distribution of hog deliveries occurred during the week, to make better use of labor and slaughtering facilities.

The time and means of making payment for the hogs appeared to be meeting the desires of the various producers and marketing agents. Those producers wishing an interim payment at the time of delivery could obtain it in most cases by marketing directly to a plant or through certain private shippers. The meat packing plants either made payment directly to the producer or provided the marketing agency with the full

payment along with the necessary information and a commission so that the marketing agency could make payment to their own customers.

It is difficult to state the extent that quality preferences of consumers were communicated to producers. Pork was not marketed in the retail stores by grade although the producers sold their hogs by grade. No evaluation was made regarding how well the price differentials paid for various grades reflected the retail value.

Physical Movement

Physical movement was concerned with both transportation and storage of the hogs from the farm to the slaughter floor. Livestock should arrive on the slaughter floor in a condition as close as possible to the condition they were in upon leaving the farm. Efficient physical movement is achieved by direct delivery of hogs with a minimum of handling, mixing and delay. The prime objective is to prevent unnecessary shrinkage, bruising, and death loss. Hogs in transit are under both an emotional and a physical strain, and anything that reduces this stress means a higher return to the producer. However, the gains from direct movement of the hogs from the farm to slaughtering floor must be balanced against the additional costs involved in shipping small lots individually. The next most desirable approach would be the assembly of load lots as near to one or several farms as possible and transporting the hogs directly to a meat packing plant. In essence this was what the majority of the shippers, both private shippers and livestock shipping associations, attempted to do. The loading and unloading of hogs at buying stations in or near the city and at the public stockyards cannot be adequately justified from the standpoint of handling efficiency. The additional handling was probably war-

ranted when it was done at locations more than 60 miles from the city.

There was considerable duplication of hog assembly facilities in many of the hog producing areas. The structure of the present hog marketing system resulted in the meat packers focusing their hog procurement policies on non-price and quasi-price factors rather than on straight price competition. Competition on these non-price and quasi-price factors led to the establishment of a variety of assembly facilities, each more or less duplicating the services of the others operating in the same area. While this duplication may have been desirable to the extent that it permitted the producers to choose among alternatives, it was undesirable for two reasons. First, the facilities provided by each marketing agency were to a large extent underutilized. Second, it permitted the different meat packing companies to avoid direct price comptition with each other for the available supply of hogs by activities that promoted non-price and quasi-price practices.

The Alberta hog market would be improved if the structure of the market were altered to both encourage less duplication of physical assembly facilities, and to streamline the movement of hogs to the meat packing plants. If the necessary changes were incorporated, handling costs would be reduced, resulting in increased producer returns. The improved efficiency of the physical movement of hogs to slaughter and the reduced marketing expenditures would increase marketing efficiency.

<u>Facilitating Functions</u>

Risk taking, market information, standardization, and grading, all facilitate the marketing of hogs. "Risk taking" is concerned with the financial responsibility for losses resulting from physical deteriora-

tion, damage, and changes in price. The majority of the losses due to risk factors were shifted to the producer with the exception of shrinkage due to delayed kill. Producers shipping livestock via truckers also paid an intransit insurance premium which covered the livestock against death en route to their destination. Outside of these two factors the producers were responsible for all losses due to shrinkage on hogs slaughtered within twenty-four hours of delivery, for carcass bruising, and death losses. Producers bore the risk of price changes except in cases where the sale price had been established previous to delivery. Variations in daily prices were not a significant factor.

In general, the system of marketing hogs in Alberta put the onus on the individual producer to select the best method of marketing his hogs. The basis of his selection depended on a variety of factors. The most important was probably the amount of market information that the producer had. Providing market information is one of the more important facilitating functions expected of the marketing system. The role of market information, including market news and market forecasts, is to aid the system to perform its functions efficiently. The need for market information in a free and competitive society was stated by Slichter.

> Upon a myriad of decisions concerning what to buy and what to sell and at what prices to buy or at what prices to sell, made by millions of individuals, depends on the working of the economic order. If these decisions are made wisely and on the basis of reasonably complete and accurate information, the system of free private enterprise may work fairly well. But naturally, the operation of the system cannot be better than the decisions of those who determine what it does. If these decisions are made by men who are ignorant of the relevant facts or who do not know how to interpret them, we must expect industry to act as if it were guided by ignorant men .... It is of basic importance, therefore, in improving the operation of free

> private enterprise, to make accurate and comprehensive market information constantly and easily available to all buyers and sellers. Not until this is done, not until it is possible for individuals to buy and sell intelligently, can we expect free private enterprise to work satisfactorily - as if it were directed by men of good judgment.[1]

Performance of an economic system is determined basically by the decisions made by those firms involved in the production and marketing of the relevant goods or services. In the process of change and adjustment, intelligent responses to changing market conditions are a necessity. Slow or inexact responses and poor performance can be expected under conditions in which decisions are made in the absence of relevant facts or by men unable to interpret facts with which they are provided.

The general lack of good market information retarded the performance of the Alberta hog market. Market news on current market conditions was limited exclusively to activities on the terminal markets. Numbers marketed, and the daily sale prices for butcher hogs, sows, and stags at the different terminal markets were reported by the Federal Government and by a number of commission firms. No price information was made available on the sale of hogs through other market agents which accounted for the majority of the hogs sold. Information regarding total marketings were disseminated weekly by the Federal Government which also provided monthly and annual reports.

Hog market forecasts are attempted by the Canada Department of Agriculture. The precision of these forecasts is hindered by the lack of

---

[1] Sumner H. Slichter. Modern Economic Society (New York: Henry Holt and Company, 1928), 853-4.

accurate data on production conditions. There is also considerable doubt as to how well producers are able to interpret the information provided and respond to the forecasts made. Forecasts are usually made in terms of percentage changes in farrowings and expected hog marketings. Producers would probably respond better to forecasts made in terms of expected hog prices. This would require the forecasters to do considerably more work, but the results would increase the economic welfare of both producers and of society in general.

Chapter VII

SUMMARY AND CONCLUSIONS

The swine industry continues to be an important sector of the agricultural economy of Alberta. Sale of slaughter hogs during 1965 contributed nearly 12 percent to total cash income of Alberta farmers. The major problem in hog marketing is the performance of the marketing system. This problem is related to the establishment of the actual sale price which is comprised of a base price less transportation, selling fees, and commissions plus possible procurement allowances. The problem is also concerned with the duplication in hog assembly operations, discriminatory pricing practices, and the level of and variation in the market power of both individual producers and marketing agencies.

The market for Alberta pork is nationwide and to some extent international. Alberta's principle export market for pork is British Columbia. The remainder is marketed in Eastern Canada and the United States. Alberta hog producers are fortunate in being situated between two pork deficient areas, British Columbia, and Eastern Canada. This enables them to market surplus pork in two separated markets.

Nearly all of the Alberta produced pork purchased by both Eastern Canadian and United States buyers was slaughtered in Western Canada. During the late 1950's more than 60 percent of the pork exported to British Columbia was shipped live, but since 1960 this has changed so that now more than 75 percent moves as pork.

The major agencies involved in the marketing of hogs in Alberta are the individual producers, livestock exchanges, public stockyards, live-

stock commission firms, private shippers, livestock shipping associations, truckers and the meat packing plants. Alberta's three public stockyards handled about 255,000 hogs (16 percent of the total marketed) in 1965, but only 100,000 were sold competitively on the livestock exchanges. A large proportion of the terminal market sales were to British Columbia meat packing plants. Alberta meat packing plants slaughtered more than 87 percent of all hogs raised in Alberta during 1965.

Performance of several aspects of the Alberta hog marketing system appeared to be inadequate based on the important goals set out. Three functions displaying inadequate performance were (1) the establishment of the sale price, (2) assembly and movement of the hogs to the meat packing plants from the farms, and (3) the collection of sufficient accurate data on market conditions and dissemination of the information in meaningful and useable form to the industry. The structure of the marketing system must be altered to bring about improvement in the performance of these functions.

Appendix

Department of Agricultural Economics

PACKER SURVEY ON HOG PROCUREMENT PRACTICES

Purpose: To find out what price and nonprice practices are used in buying hogs.

1. We would like to know how you plan each week's hog operations:

   a. How do you estimate needed kill?

   b. How do you estimate probable deliveries?

   c. Suppose one estimate is larger than the other, what actions do you take?

   d. Suppose deliveries during the week prove to be excessive or inadequate, what action do you take?

2. Next, we would like to know how you decide what price you are willing to pay for hogs:

   a. How is it related to nearest terminal market price?

   b. How is it influenced by other terminal market prices?

   c. How is it influenced by wholesale pork products prices?

   d. How is it related to prices you receive for pork products?

3. We would like to know how your pricing procedures are affected by different market conditions:

   a. By rising, falling, and steady hog market prices?

   b. By rising, falling, and steady hog deliveries?

   c. By rising, falling, and steady pork product prices?

4. We would like to know under what circumstances you pay different prices to different shippers:

   a. Country points versus city deliveries?

   b. Large shipments versus small shipments? (What is the dividing point?)

   c. Steady customers versus irregular customers?

   d. Deliveries at special times? (When?)

   e. Special quality characteristics?

5. We would like to know what practices or means you use to obtain increased deliveries (price and other):

   a. In short run? (e.g., within a given week)

   b. Over long run?

6. We would like some information on your hog killing operations?

   a. What is your daily kill capacity under normal conditions?

   b. How much and by what means can you exceed normal capacity when additional kill is needed?

   c. How much seasonal variation do you experience? (High and low weeks as percentage of normal capacity.)

   d. To what extent and under what condition do you store frozen pork (not processed)?

7. We need some additional information on the number and sources of your hog purchases in 1965.

	Percent of total	Price basis	Buying costs
a. Number purchased			
b. Place of purchase			
(1) City			
(a) Terminal			
(b) Plant			
(c) Buying Station			
(2) Country			
(a) Buying stations (own)			
(b) Direct from farms			
(c) Delers and drovers			
(3) Total	100		
c. Delivered by			
(1) Farmer			
(2) Trucker			
(3) Other (who?)			
d. Sold by or through			
(1) Direct by farmer			
(2) Commission firm (ALC)			
(3) Shipping Assn. (not ALC)			
(4) Trucker			
(5) Other (who?)			

BIBLIOGRAPHY

BROWN, J. A., A. A. Heidt, and R. H. D. Phillips. "Hog Marketing in Saskatchewan; Preliminary Report Prepared for the Saskatchewan Advisory Swine Council," Regina, Saskatchewan; Department of Agriculture, June 1966.

CANADA, Department of Agriculture, Production and Marketing Branch. "Calgary Annual Livestock Market Report, 1965." Calgary: 1966.

______, Department of Agriculture, Production and Marketing Branch. "Edmonton Annual Livestock Market Report, 1965." Edmonton: 1966.

______, Department of Agriculture, Production and Marketing Branch. "Lethbridge Annual Livestock Market Report, 1965." Lethbridge: 1966.

______, Department of Agriculture, Production and Marketing Branch. Livestock Market Review, Annual, Ottawa.

______, Department of Agriculture, Production and Marketing Branch. Livestock and Meat Trade Report, Weekly, Ottawa.

______, Department of Justice, Restrictive Trade Practices Commission Report Concerning the Meat Packing Industry and the Acquisition of Wilsil Limited and Calgary Packers Limited by Canada Packers Limited. Ottawa: Queen's Printer, 1961.

______, Dominion Bureau of Statistics. Livestock and Annual Product Statistics, Annual. Ottawa: Queen's Printer, 23-203.

CARMICHAEL, J. S. and T. S. Rackham. "Livestock Marketing in Western Canada." Regina, Saskatchewan: Department of Cooperation and Cooperative Development, about 1951.

COMMITTEE ON PRICE DETERMINATION, Cost Behavior and Price Policy, New York: N.B.E.R., 1943.

ENGLISH, R. E. "Statistics of Agriculture for Alberta, 1964 and 1965." Pub. 853-2, Economics Division, Alberta Department of Agriculture. Edmonton: Nov. 1966.

FOWLER, Stewart H. The Marketing of Livestock and Meat, 2nd ed. rev., Danville, Illinois: Interstate Printers and Publishers Inc. 1961.

KENYON, N. L. "The Marketing of Hogs in Ontario." Toronto: University of Toronto, about 1958.

LERNER, A. and T. S. Patil. "Changes in the Market Structure of Grocery Retailing," Canadian Journal of Agricultural Economics, XIII, 1965.

LITTLE, I.M.D., A Critique of Welfare Economics, London: Oxford University Press, 1950.

MANNING, Travis W. "Country Livestock Auctions and Market Performance." Agricultural Economics Technical Bulletin 1, Edmonton: University of Alberta, September 1966.

MARSHALL, R. G. and P. L. Beerstecher. "The Demand Supply and Price Structures for Hogs in Canada," Guelph, Ontario: Ontario Agricultural College, August 1960.

McCALLISTER, K. J. "The Role of Market News in Marketing and Some Problems," Journal of Farm Economics, XXXVII (August 1955), 461-470.

NICHOLSON, R. C., "Livestock Meat and Farmers." Pub. 101, Saskatoon: University of Saskatchewan, 1965.

POETSCHKE, L. E., "A Study of Price Determination in the Alberta Hog Market," Ottawa: Canada Department of Agriculture Publication 1074, March 1960.

__________, and William MacKenzie. "The Development of Producer Marketing Boards in Canadian Agriculture." Edmonton: University of Alberta, 1960.

SCITOVSKY, Tibor, Welfare and Competition, London: George Allen and Unwin Ltd., 1952.

SELECT COMMITTEE OF THE LEGISLATIVE ASSEMBLY OF MANITOBA, "Livestock Marketing in Manitoba." Winnipeg: Queen's Printer of Manitoba, 1965.

SLICHTER, Sumner H., Modern Economic Society, New York: Henry Holt and Company, 1928.

SOSNICK, S. H. "A Critique of Concepts of Workable Competition," Quarterly Journal of Economics, LXXII (February 1958), 380-423.

SOSNICK, S. H., "Operational Criteria for Evaluating Market Performance," Market Structure Research, Edit. P. L. Farris, Ames, Iowa: Iowa State Press, 1964.

WILLIAMS, W. F., and T. T. Stout. Economics of the Livestock-Meat Industry, New York: MacMillan Co., 1964.

Typed by

MILDRED HRUBIZNA